CLAIMS

1. (Currently Amended) A method for generating a reference transmission signal for use in testing a communications system, comprising:

capturing a data packet transmission signal containing a plurality of reference data;

digitizing said data packet transmission signal;

retrieving at least a selected portion of said plurality of reference data from said digitized data packet transmission signal to produce a plurality of retrieved data;

modulating a carrier signal with said plurality of retrieved data to produce a digital transmission signal; and

storing said digital transmission signal following said modulating of said carrier signal and prior to a use of said digital transmission signal in producing said reference transmission signal for transmission and demodulation.

2. (Original) The method of claim 1, wherein said capturing a data packet transmission signal containing a plurality of reference data comprises receiving said data packet transmission signal as an analog signal.

3. (Original) The method of claim 1, wherein said capturing a data packet transmission signal containing a plurality of reference data comprises receiving said data packet transmission signal as a wireless signal.

4. (Original) The method of claim 1, wherein said capturing a data packet transmission signal containing a plurality of reference data comprises receiving said data packet transmission signal as a wired signal.

5. (Original) The method of claim 1, wherein said retrieving at least a selected portion of said plurality of reference data from said digitized data packet transmission signal to produce a plurality of retrieved data comprises demodulating at least a selected portion of said digitized data packet transmission signal to produce a plurality of demodulated data.

6. (Original) The method of claim 1, wherein said retrieving at least a selected portion of said plurality of reference data from said digitized data packet transmission signal to produce a plurality of retrieved data comprises decoding at least a selected portion of said digitized data packet transmission signal to produce a plurality of decoded data.

7. (Original) The method of claim 1, wherein said modulating a carrier signal with said plurality of retrieved data to produce a digital transmission signal comprises encoding said carrier signal with said plurality of retrieved data.

8. (Original) The method of claim 1, wherein said storing said digital transmission signal comprises storing said digital transmission signal in memory.

9. (Currently Amended) The method of claim 1, further comprising modifying one or more selected bits of said plurality of retrieved data prior to said modulating a carrier signal with said plurality of retrieved data to produce [[a]] said digital transmission signal.

10. (Original) The method of claim 1, further comprising:

retrieving said stored digital transmission signal; and

frequency up-converting said retrieved digital transmission signal to produce said reference transmission signal.

11. (Original) The method of claim 10, further comprising modifying one or more selected bits of said plurality of retrieved data prior to said modulating a carrier signal with said plurality of retrieved data to produce a digital transmission signal.

12. (Currently Amended) An apparatus including circuitry for generating a reference transmission signal for use in testing a communications system, comprising:

signal capture means for capturing a data packet transmission signal containing a plurality of reference data;

digitizer means for digitizing said data packet transmission signal;

first data retrieval means for retrieving at least a selected portion of said plurality of reference data from said digitized data packet transmission signal to produce a plurality of retrieved data;

signal modulator means for modulating a carrier signal with said plurality of retrieved data to produce a digital transmission signal; and

storage means for storing said digital transmission signal following said modulating of said carrier signal and prior to a use of said digital transmission signal in producing said reference transmission signal for transmission and demodulation.

13. (Original) The apparatus of claim 12, further comprising data modifier means for modifying one or more selected bits of said plurality of retrieved data prior to said modulation of a carrier signal with said plurality of retrieved data to produce a digital transmission signal.

14. (Original) The apparatus of claim 12, further comprising:

second data retrieval means for retrieving said stored digital transmission signal; and

frequency conversion means for frequency up-converting said retrieved digital transmission signal to produce said reference transmission signal.

15. (Currently Amended) The apparatus of claim 14, further comprising data modifier means for modifying one or more selected bits of said plurality of retrieved data prior to said modulation of a carrier signal with said plurality of retrieved data to produce [[a]] said digital transmission signal.